GEOGRAPHIC NEWS BULLETINS

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STRAINING HIS CHINESE BACK AGAINST THE YANGTZE CURRENT THAT YOU MAY HAVE GOOD VARNISH

(See Bulletin No. 3)

HOW TEACHERS MAY OBTAIN THE BULLETINS

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Where Izaak Walton Fished and Wrote Fine Prose*

THE GIFT by Americans of thousands of dollars for the rebuilding of the Shakespeare theater at Stratford-on-Avon again reveals the interest bestowed on the literary landmarks of England.

Both lovers of literature and lovers of fishing were saddened at the loss this year of Izaak Walton's thatched, half-timbered cottage at Shallowford, Staffordshire. Walton's cottage met a fate similar to that sustained by the theater built especially for presentation of Shakespeare's plays, which was destroyed by fire.

As St. Andrews, Scotland, is the Mecca for golfers and Stratford-upon-Avon is the shrine of drama lovers, so Shallowford has been the place of pilgrimage for fishermen and for admirers of Walton's prose. Staffordshire, unrolling its green, cultivated hills and valleys midway between smoky Birmingham and busy Liverpool, was the birthplace of Walton and the scene of those fishing expeditions wherein he angled and caught, with the same hook, trout and many paragraphs we still acclaim.

Dedicated Book to Man Who Let Him Fish on Estate

Northwest, a few miles from the Shallowford cottage, lies Madeley, country seat of John Offley, Esquire, to whom Walton dedicated the "Compleat Angler" in appreciation for permission to fish on Offley's estate. Northeast ripples the Dove through Dovedale, a green carpeted, English sort of canyon, where Walton fished with that young rake Charles Cotton, who added to the "Compleat Angler" the sections on fly-fishing. Near Beresford, at the upper end of the Dale, stands the famous fishing house built by Cotton for the use of "father Walton" and himself.

Nothing could be in greater contrast to an American sportsman's fishing camp than Cotton's fishing house on the Dove. The latter presents the appearance of a rather large, private mausoleum. Its walls are cut stone. Flanking the stone arch doorway, two windows admit light to the fishing house through diamond-figured, leaded glass panes. Within, the single room measures 15 feet square. Black and white marble squares pave its floor. A black marble-topped table occupied the center of the room, and at one time painted panels of scenes on the Dove, and of Cotton and Walton in dress of the time, ornamented the walls. Amid classic severity the only human note can be found on the fireplace where the initials "C. C., I. W.," record the famous friendship. Over the doorway on the outside runs the inscription: "Piscatoribus Sacrum" (sacred to fishing).

Walton did not take his fishing straight. He mixed trout with a kindly philosophy and poetry. The "Angler's Song" tells why he thinks fishing is superior to all other sports:

> "Of recreation there is none
> So free as fishing is alone;
> All other pastimes do no less
> Than mind and body both possess;
> My hand alone my work can do,
> So I can fish and study, too."

The most famous fisherman of them all left his pole and line to fish unattended while he sought shelter under a tree to talk with a pupil on Montaigne or worms.

*This bulletin will be of special interest to teachers of English literature.

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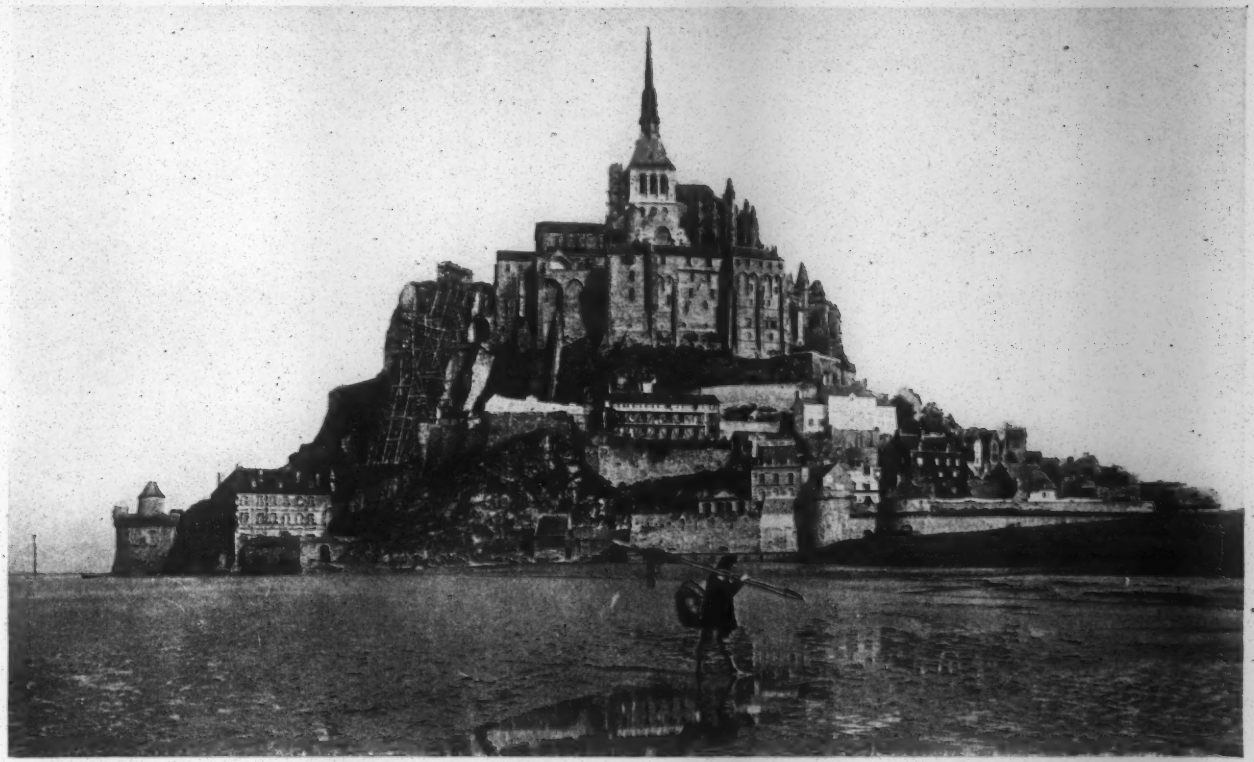

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WAS MONT ST. MICHEL THE INSPIRATION FOR QUEBEC?

Jacques Cartier, French explorer who discovered the St. Lawrence River, lived at St. Malo, about 20 miles away from the fortress-church, Mont St. Michel. He selected the rock of Quebec for a winter camp, and there is a close parallel in geographic situation between Quebec and Mont St. Michel (see Bulletin No. 4).

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Carlsbad Cavern Draws Many Visitors

CARLSBAD CAVERNS, New Mexico, one of Uncle Sam's official scenic wonders for the past four years, has gained such popularity since its setting aside as a National Monument in October, 1923, as a result of its extensive exploration by the National Geographic Society, that it now draws many visitors. Highways leading to the National Monument have been improved, and this season 26,436 persons visited the cave.

A communication to The Society from the late Dr. Willis T. Lee, who conducted its explorations, described the vast underground fairyland.

"About half a mile from the foot of the shaft," wrote Dr. Lee, "we enter the part of the cave reserved as a National Monument and soon pass beneath the natural opening. This opening far above us, which seems so awesome at the surface, appears from the floor of the spacious cavern like a small and very inconspicuous aperture. Here we give it scarcely a second thought and pass on to the more impressive features which appear at each turn.

"As we proceed we gradually make our way deeper and deeper into the earth. For nearly a mile, or a distance almost equivalent to that from the White House along Pennsylvania Avenue to the Capitol, in Washington, we traverse a passage of astonishing dimensions. The walls are very irregular, approaching to within 100 feet of each other in a few places, then receding in lateral chambers many times that width. At the side of the passageway are many alcoves opening into rooms, few of which have been explored.

Chambers Hundreds of Feet Wide and Very High

"In most places the walls are rough and jagged where masses of rock, now lying on the floor, have fallen. But in a few places the walls are relatively smooth, having been polished by waters which flowed through this passageway ages ago.

"There is relatively little dripstone in this part of the cave. And yet every now and again, as a beam of light is directed into the darkness, one is startled at the sight of a snow-white figure perched on some rock, like the proverbial ghost on a tombstone. These are stalagmites built up by the slow dripping of water charged with carbonate of calcium from the limestone of the roof. A few of these stalagmites, like Yeitso's Pillar, have been built up into magnificent fluted and ornately decorated columns, as if supporting the ceiling of a vaulted cathedral of vast dimensions.

"A little more than a quarter mile beyond the natural opening, we enter the spectacular part of Carlsbad Cavern. Here we find chambers of unbelievable dimensions. Our way leads ever downward, over enormous jagged blocks of limestone fallen from the roof.

"The chambers in this part of the cave are several hundred feet wide and the vaulted ceilings so far above us that in some places we are not able to see them, much less estimate their height. It seems like gazing upward on a cloudy night. Our feeble lights only magnify the void.

"At the foot of a great heap of rocks 700 feet below the surface at the entrance, three large chambers open off the main hall. The largest may be called Shinav's Wigwam in honor of the kingly warrior of Navajo mythology. Because of its size and the glory of its decoration, this great chamber may appropriately be likened to the glorified wigwam of the great wolf god Shinav, who in battle used petrified trees for arrows.

Izaak Walton was born in Stafford in 1593. Fish and live long early became his philosophy, and he proved his contention by attaining the age of 90.

We regard the span of Walton's life as one of the stormiest in England's history. The Pilgrims were sailing to New England to escape religious persecution when Walton at 27 ran a hardware store in a 7½ by 5 foot London room. With the defeat of the Royalists by Cromwell in 1644 Walton retired to Stafford. All England struggled amidst the tumult of revolution, but Izaak merely moved from the banks of the Thames to the banks of the Dove. The "Compleat Angler's" soothing prose praising the beauty of an English field after a shower and explaining how to put a worm on a hook—this dissertation, mild as a May morning, first appeared in that hectic year when Cromwell proclaimed himself Lord Protector and England became a republic.

Walton's Fragment on the Meadow Lark

"No life, my honest Scholar," Walton has his character Piscator advise Venator, "no life so happy and so pleasant as the life of a well-governed angler; for when the lawyer is swallowed up with business, and the statesman is preventing or contriving plots, then we sit on cowslip banks, hear birds sing, and possess ourselves in as much quietness as these silent, silver streams, which we now see glide so quietly by us. Indeed, my good Scholar, we may say of angling as Dr. Boteler said of strawberries, 'Doubtless God could have made a better berry, but doubtless God never did,' and so, if I might be a judge, 'God never did make a more calm, quiet, innocent recreation than angling.'"

Walton inscribed a tribute to the meadow lark which posterity treasures more than his "observations on the eel." He wrote:

"As first, the lark, when she means to rejoice to cheer herself and those that hear her, she then quits earth, and sings as she ascends higher into the air; and having ended her heavenly employment, grows then mute and sad to think she must descend to the dull earth, which she would not touch but of necessity."

Bulletin No. 1, December 12, 1927.

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AIRPLANE VIEW OF ETON, A FAMOUS ENGLISH SCHOOL ON THE THAMES

Izaak Walton ran a hardware store in London and fished on the Thames not far from Eton. When the civil war broke out, resulting in Charles I losing his head, Walton retired to fish and write near the Dove River. Eton is one of the most famous of English public schools.

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Why Varnish Users in the United States Are Concerned When War Breaks Out in China

A FLEET of specially designed American gunboats cruises on the Yangtze River from Shanghai to Hankow, a distance equal to that between New Orleans and Cairo, Illinois. Many Americans have wondered why these gunboats patrol far into China.

Tung oil, a substance vital to the American varnish and oilcloth industries, is one answer. American gunboats protect merchant ships loaded, in part, with tung oil.

When the paint store clerk explains that varnish is up in price because of civil war in China, do not scoff. Tung oil, or Chinese wood oil, has skyrocketed from its normal price of 12 cents per pound to 26 cents per pound. The cost of China's civil war to the American manufacturer and to the consumer on this one item is startling. Manufacturers are paying the increased price on imports which total more than one hundred million pounds of tung oil annually.

Oilcloth Outdoes the Duck Because of Tung Oil

Perhaps you have wondered what the woman in the magazine advertisement who pours boiling hot water from the teakettle onto the dining room table thinks about. She ought to be giving thanks to tung oil trees that the table escapes damage. When Johnny and Mary play "rainy day" in the parlor and the floor shows no ill effects, praise goes to weary oil pressers living in the mountains of Szechwan Province. Oilcloth sheds water better than a duck and varnish brushed on the bedroom floor one evening can be walked on next morning, because of the magic oil in a green nut which grows on trees deep in China—and in Florida.

Civil war in China five or ten years hence will not bring such a flurry in tung oil because Florida, Georgia, Mississippi and Louisiana will then be producing. Plant explorers of the Department of Agriculture saw the problem facing the American paint and varnish industry, and eighteen years ago introduced the first tung oil tree. If Florida to-day had 50,000 acres of producing tung oil trees she would be enjoying an extraordinary burst of prosperity, but there are only 3,000 acres of trees in all the south. Few farms have trees older than saplings, so civil war in China has boosted tung oil prices.

Another Debt We Owe the Clever Chinese

Boats, as any boat owner knows, demand constant attention—calking, painting and refitting—so it is natural that a water-wise people like the Chinese would discover an efficient preservative for boat hulls. Chinese junks float because tung oil seed pulp calks their seams and tung oil soaks their timbers. The strange thing is that the Western World did not appreciate the magic of the Chinese wood oil before 1869. Now it takes a favored place beside such other Chinese contributions as silk and gunpowder. Tung oil shares its field of service as a dryer and waterproofing agent with the more widely used linseed oil.

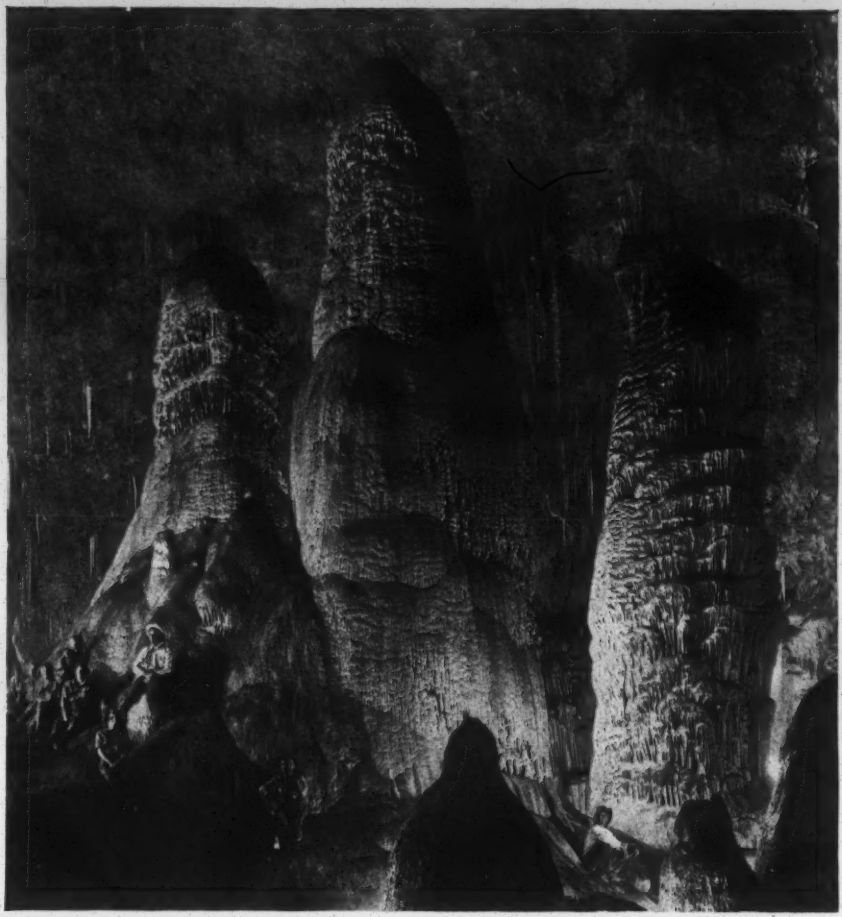
To find the source of China's wood oil a traveler must journey into the stark mountain valleys of Hunan and Szechwan Provinces. If he expects to find orchards he will be disappointed, for tung oil trees, like American hickories, grow where Nature plants them. The Chinese farmer depends on vegetables and grain,

"The chambers about the Wigwam are separated from the master room by curtains and partitions of gleaming onyx formed by deposition of lime carbonate from waters dripping from the roof. The great dome is so high that it is only dimly illuminated by the torches.

"Most of the ceiling is covered with dripstone. Thousands of stalactites hang singly, in doublets, in triplets, and in groups. They range from a few inches to lengths representing the entire height of the room, and in diameter from that of a small pencil to masses many feet thick. In some places they hang so close that they coalesce at the top, forming spiny masses weighing thousands of tons."

Bulletin No. 2, December 12, 1927.

Note: The complete story of the exploration and discovery of Carlsbad Cavern is contained in the September, 1923, and January, 1925, numbers of the National Geographic Magazine.



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MONUMENTS BUILT BY DROPS OF WATER IN CARLSBAD CAVERN

The size of these stalagmites can be gauged by the human figures grouped around the base. These formations occur in the Big Room of the cave, the ceiling of which arches 200 feet above the floor. Caves represent an interesting cycle among the changes going on in the world constantly. Seabottom rose and became limestone hills, rain water dissolved the hills bit by bit, sometimes on the surface and sometimes beneath the surface, forming caves. Often the water evaporated, leaving its burden of dissolved calcium carbonate to make a cave ornament; then again the water carried its burden on to the ocean, where an oyster took it for his solid overcoat. The oyster lived and died and his shell fell to the bottom, becoming part of a new layer of limestone rock which some day may again rise above the surface of the ocean, starting the cycle all over again.

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Historical Shrines of United States and Canada in France*

MANY Americans traveling abroad pay tribute at the shrines of our national heroes in England. They visit Sulgrave Manor, the home of the Washingtons; Scrooby Manor, the home of William Brewster; the birthplace of Governor William Bradford at Austerfield, and The Blue Idol meeting house of William Penn.

American historical shrines of equal importance in France have received less attention. Interest in them has been kindled by the pilgrimage to homes of colonial heroes from which a large party of French-Canadian leaders of Quebec Province has returned.

Since Jacques Cartier, Champlain, and La Salle are heroes to the English-speaking as well as the French-speaking peoples of North America, the Quebec pilgrims represented the whole continent at many of the shrines.

Port Where Liners Dock Home of Man Who Explored Lake Michigan

Landing at Cherbourg, they honored the home town of Jean Nicolet, who first explored Lake Michigan nearly three centuries ago. Crossing the mouth of the Seine to Honfleur, they placed flowers on an historical plaque, marking the port from which Samuel de Champlain sailed for the New World.

At Rouen they entered the cathedral where La Salle was baptized. At Dieppe a reception was held because ancestors of many Quebec families came from Dieppe. There was, for example, Louis Hebert, the pharmacist, who became the first farmer of Canada. A short trip out of Paris brought the French-Canadian historical pilgrims to the curious Norman chapel where Maisonneuve, brave founder of Montreal, was baptized.

Leaving northern France, they went south to Nimes and to the village of Vestric-Candiac, birthplace of Marquis de Montcalm, who so nobly but vainly defended France's foothold in America from the English forces under General Wolfe. At La Rochelle, above Bordeaux, the pilgrims visited the harbor from which the founders of Montreal sailed and the home of the Le Moynes whose sons founded New Orleans, Louisiana, and Mobile, Alabama. Not far away is the revered soil of Brouage-en-Saintonge, birthplace of Champlain.

Cartier's Residence at St. Malo Still Stands

Comparable in importance to Sulgrave Manor in England is an ancient stone manor house near St. Malo which served as a climax to the tour. This ancient port saw the sails of Jacques Cartier's ships fade out as he voyaged west one morning in 1534. He sailed to discover the St. Lawrence River. Daring the unknown, he left behind him the comforts of Manoir Limoilou, his home, which still stands on the outskirts of St. Malo.

Most members of the Quebec party made side trips to towns in Normandy, Picardy, Champagne, and Brittany, which their ancestors left to try their fortunes in the New World.

Every French-Canadian, it is said, knows his French ancestors, their birthplaces and the ships in which they sailed. After Wolfe won Quebec, immigration

*This bulletin will be of special interest to teachers of history.

not nuts, to feed his family. But if good fortune blesses him, he will own also three or four tung oil trees to supply a pin money crop.

Buyers move through the valleys in the fall, purchasing small stores of tung oil tree nuts. Removal of the green flesh releases the seeds, five in each nut. After being roasted and cleaned, the seeds are ground by patient bullocks turning a stone roller, and the resultant pulp is mixed with straw. Cakes of tung seed pulp the size of Swiss cheese disks are inserted in a hollowed log. A pile driver device squeezes 40 per cent of the oil out of the cakes.

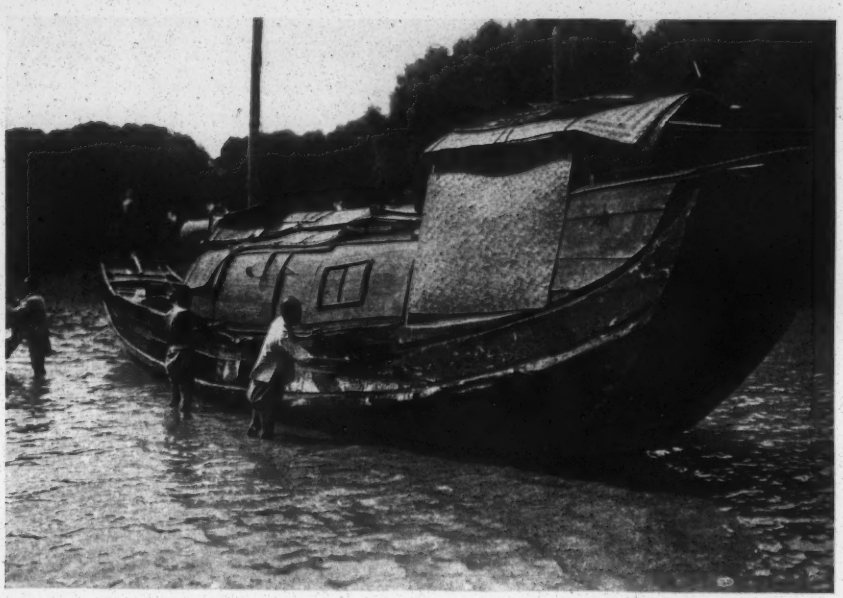
Daring the Yangtze Rapids to Get Tung Oil to America

Tung oil itself helps to solve the difficulty of getting a liquid to market in a region where wheeled vehicles are useless. The Chinese make a serviceable container out of a bamboo basket lined with sixteen thicknesses of paper coated with tung oil varnish. This container is light, but it will bear the weight of 120 to 380 pounds of sloshing tung oil. Coolies swing the baskets on poles and carry them down to a river shipping point. Still in baskets, tung oil shoots the Yangtze gorges in junks. A rudder in front as well as in back does not always prevent a junk piling up on a rock and releasing an $8,000 cargo and the crew to the muddy river. Huge storage tanks for receiving tung oil have been built at Hankow, which is to-day a revolution storm center.

In the past oil was brought to the United States in white oak barrels. The American demand is now so great that tung oil comes across the Pacific in tank ships at the rate of 12,000,000 gallons per year.

Bulletin No. 3, December 12, 1927.

Note: The Office of Foreign Seed and Plant Introduction, Department of Agriculture, has greatly affected the course of agriculture in the United States. Promotion of the growth of tung oil trees is an activity typical of its work. What this office does and how its men explore for plants is contained in "A Hunter of Plants" by David Fairchild in the National Geographic Magazine for July, 1919.



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ANOTHER PRACTICE THAT THE WESTERN WORLD HAS LEARNED FROM CHINA

The Chinese are great users of boats—many of them live on boats. Naturally they learned how to make boats last long. These men are painting a junk with wood oil or tung oil which protects wood and is not affected by water. Since the United States has learned the virtues of tung oil, our imports of it have increased to 12,000,000 gallons a year. We use it for varnish and oilcloth.

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Cocos Island: Which Thrives on Pirate Gold That Has Never Been Found

WHETHER it contains hidden treasure or not, Cocos Island is profitable to at least one man.

Another expedition will start for Costa Rica's tiny possession, 400 miles off coast in the Pacific Ocean. Gold hunting expeditions have become annual fetes, practically, in the life of Cocos Island.

Reports from the island, which is off the regular steamer lanes, have it that the solitary Dutchman, who comprises the entire population of the place, is still engaged in raising goats which he sells at a good price to the gold hunters. If he is still living, he will doubtless have another opportunity to smile at those who seek under the soil what he finds so readily above it.

Pirates Valued Island for Isolation and Fresh Water

This hilly bit of land, about a third as large as Staten Island, is fringed and plumed, as the name indicates, with waving palm trees. It rises solitary and alone from the broad bosom of the Pacific, thousands of miles from the myriad isles of Oceania, to the southwest and 500 miles from the lonely Galapagos almost directly south.

Cocos Island was in the early days of colonization a favorite stopping place for pirates. Buccaneers called there often to replenish their supply of fresh water and to rest secure from the frigates sent to destroy them.

A member of a party of pirates under Edward Davis describes the island in those days: "The middle is a steep hill, surrounded with a plain declining to the sea. This plain is thick set with coconut trees; but what contributes greatly to the pleasure of the place is that a great many springs of clear and sweet water, rising from the top of the hill, are there gathered as in a deep large basin or pond, and the water having no channel, it overflows the verge of its basin in several places and runs trickling down in pleasant streams. In some places of its overflowing the rocky side of the hill, being more than perpendicular, and hanging over the plain beneath, the water pours down in a cataract, so as to leave a dry space under the spout and form a kind of arch of water. The freshness which the falling water gives the air in this hot climate makes this a delightful place."

Believe Treasure of Peru Buried on Island

The treasure for which so many expeditions have been equipped, however, is believed to have been buried there following the shipwreck of the schooner *Mary Dyer*, about two centuries ago. This ship was anchored in Callao, the harbor of Lima, Peru, when revolutionists threatened the town. All the treasure and precious relics of the city were loaded on the *Mary Dyer*, but the crew mutinied and sailed out of port with all the wealth of the city aboard.

It is not known whether the mutinous crew ever returned for the treasure they buried after the shipwreck on Cocos Island. At least a dozen expeditions have visited the isle, including one under the auspices of the Costa Rican government. Many Costa Ricans believe in the hoard, and even American consuls have taken a fling at it.

Bulletin No. 5, December 12, 1927.

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from France ceased. Since French-Canadians have been loath to intermarry with other races, their family lines remain intact. The colony planted by France numbered 20,000 when England took it over. Yet the Quebec leaders on their historical pilgrimage to France represented more than four million descendants of the founders of New France who are now citizens of Canada and the United States.

Bulletin No. 4, December 12, 1927.

SKETCH MAP SHOWING HOME TOWNS OF CHAMPLAIN, JACQUES CARTIER, LA SALLE AND OTHER FRENCH EXPLORERS WHO HAVE FIGURED IN AMERICAN HISTORY

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BIRDS ON A VALUABLE PERUVIAN ISLAND IN THE PACIFIC

The Humboldt Current that washes the desert islands off the coast of Peru is alive with fish which supply food for hundreds of thousands of guanayes (birds) living on the islands. Through protection established by the government these islands now supply 90,000 tons of fertilizer annually for the increase of agricultural products in Peru and elsewhere in the world (see Bulletin No. 5).